

## Scatter Plots and Correlation

### GUIDED PRACTICE

**Vocabulary** Apply the vocabulary from this lesson to answer each question.

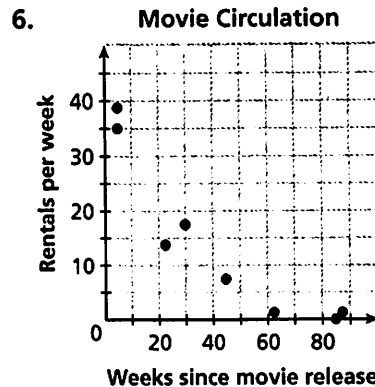
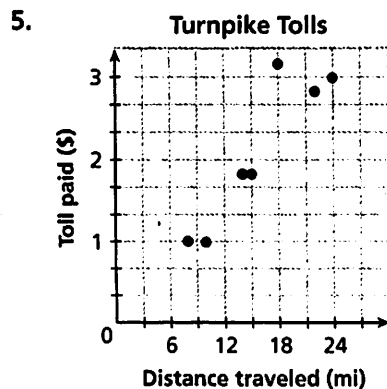
1. Give an example of a graph that is not a *scatter plot*.
2. How is a scatter plot that shows *no correlation* different from a scatter plot that shows a *negative correlation*?
3. Does a *trend line* always pass through every point on a scatter plot? Explain.

Graph a scatter plot using the given data.

4.

| Garden Statue | Cupid | Gnome | Lion | Flamingo | Wishing well |
|---------------|-------|-------|------|----------|--------------|
| Height (in.)  | 32    | 18    | 35   | 28       | 40           |
| Price (\$)    | 50    | 25    | 80   | 15       | 75           |

Describe the correlation illustrated by each scatter plot.

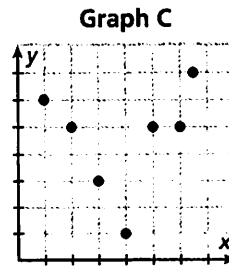
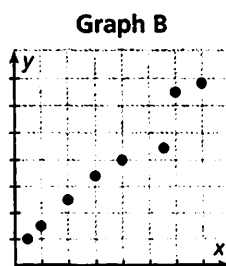
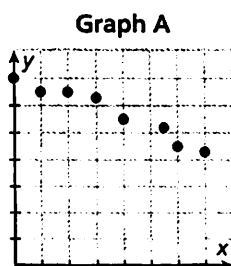


Identify the correlation you would expect to see between each pair of data sets. Explain.

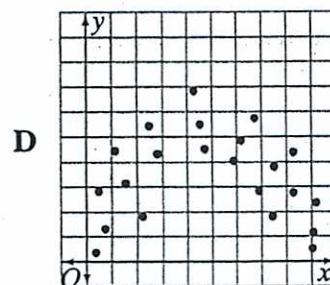
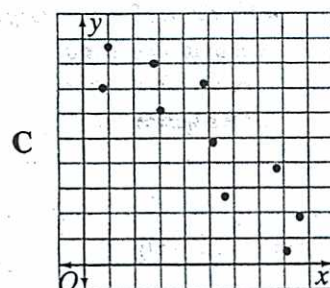
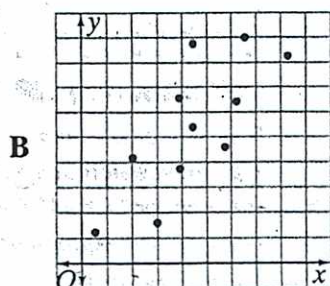
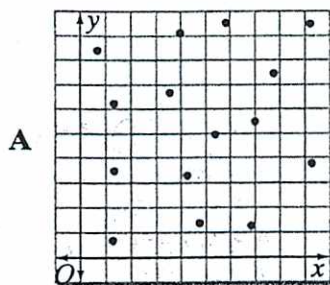
7. the volume of water poured into a container and the amount of empty space left in the container
8. a person's shoe size and the length of the person's hair
9. the outside temperature and the number of people at the beach

Choose the scatter plot that best represents the described relationship. Explain.

10. age of car and number of miles traveled
11. age of car and sales price of car
12. age of car and number of states traveled to



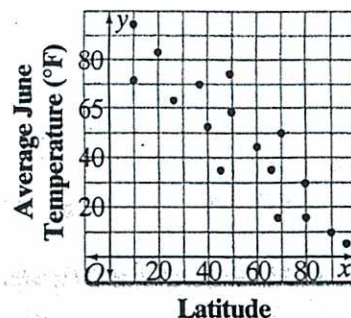
- 1 Which of these scatter plots shows a negative correlation?



- 2 Tina records the ages and weights of 12 children in her neighborhood. If she records this data in a scatter plot, what type of relationship will she most likely see?

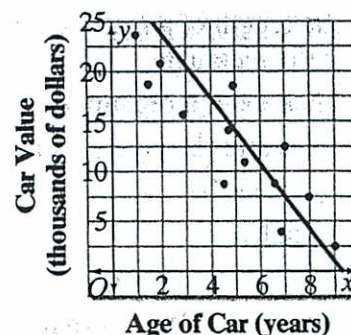
- F Positive correlation
- G Negative correlation
- H No correlation
- J Constant correlation

- 3 Describe the relationship between the average June temperatures and the latitude positions of cities on the scatter plot below.



- A The temperatures are about the same at all latitudes.
- B The lower the latitude, the lower the temperature.
- C The higher the latitude, the lower the temperature.
- D The higher the latitude, the higher the temperature.

- 4 The scatter plot below shows the relationship between the ages of various cars of the same model and their values.



Approximately how much should you expect to pay for a 6-year-old car?

- F \$5,000
- G \$10,000
- H \$15,000
- J \$20,000